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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/644,038	08/20/2003	Michael E. Dobbs	ITDE-PACD110US	5077

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EXAMINER

STAFIRA, MICHAEL PATRICK

ART UNIT

PAPER NUMBER

2877

DATE MAILED: 01/11/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/644,038

Applicant(s)

DOBBS ET AL.

Examiner

Michael P. Stafira

Art Unit

2877

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-20 is/are allowed.
- 6) ☒ Claim(s) 21 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

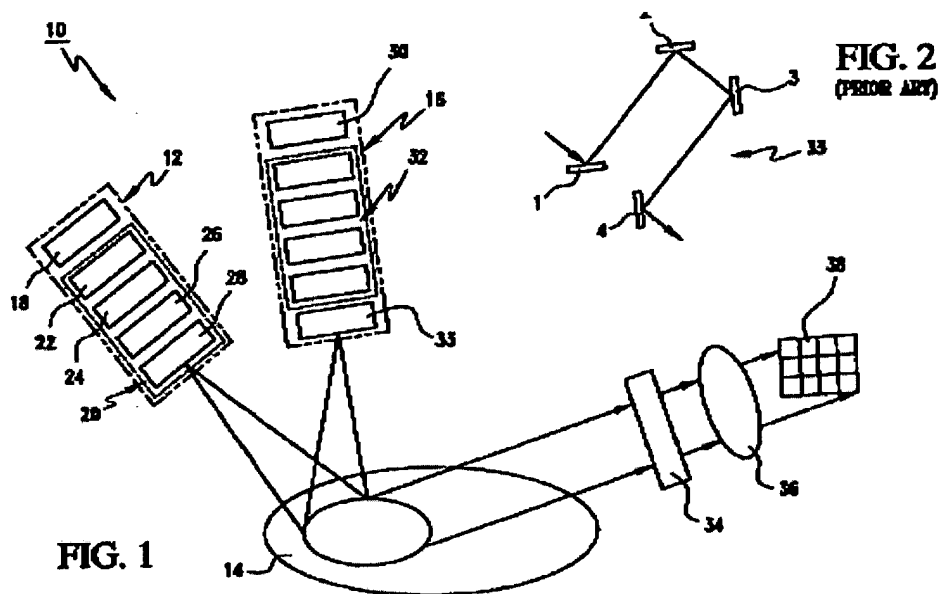
A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claim 21 is rejected under 35 U.S.C. 102(e) as being anticipated by Hunt ('686).

Claim 21

Hunt ('686) discloses means for generating a plurality of differently-polarized signals respectively varying at different frequencies (Fig. 1, Ref. 18, 30); and means for imaging (Fig. 1, Ref. 38) optical radiation at the different frequencies using a phase sensitive technique after the optical signal has interacted with the sample (Fig. 1, Ref. 14; Col. 5, lines 44-54).



Allowable Subject Matter

3. Claims 1-20 are allowed over the prior art of record.

4. The following is a statement of reasons for the indication of allowable subject matter:

Regarding claim 1, the prior art fails to disclose or make obvious a system for remotely imaging a sample using optical radiation reflected/scattered from the sample having a focal planar array configured to detect the first and second optical radiation after interaction with the sample and generate a single detection signal; a first lock-in amplifier configured to process the single detection signal based on the first frequency to produce a first output signal; and a second lock-in amplifier configured to process the single detection signal based on the second frequency to produce a second output signal; wherein the FPA detects the first and second optical radiation free-of image mis-registration, and in combination with the other recited limitations of claim 1.

Claims 2-6 are allowed by the virtue of dependency on the allowed claim 1.

Regarding claim 7, the prior art fails to disclose or make obvious a method of remotely imaging a sample using optical radiation reflected/scattered from the sample having the steps of

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detecting using a FPA, the first and second beams of optical radiation after interaction with the sample to produce a detection signal, wherein the first and second beams of optical radiation are detected by the FPA free-of image mis-registration; determining a first portion of the detection signal that is present at the first frequency; determining a second portion of the detection signal that is present at the second frequency; and obtaining polarization information about the sample based on the first portion of the detection signal and the second portion of the detection signal, and in combination with the other recited limitations of claim 7. Claims 8-11 are allowed by the virtue of dependency on the allowed claim 7.

Regarding claim 12, the prior art fails to disclose or make obvious a system for remotely imaging a sample using optical radiation reflected/scattered from the sample having a single FPA configured to detect the optical radiation from the plurality of sources after interaction with the sample and generate a detection signal wherein the plurality of sources are detected by the FPA free-of image mis-registration; a plurality of lock-in amplifiers corresponding to the plurality of sources and respectively configured to generate components of the detection signal that are present at the different frequencies; wherein the components of the detection signal correspond to radiation from the sample at the different polarizations, and in combination with the other recited limitations of claim 12. Claims 13-16 are allowed by the virtue of dependency on the allowed claim 12.

Regarding claim 17, the prior art fails to disclose or make obvious a method of remotely imaging a target using optical radiation reflected/scattered from the target having the steps of transmitting the first and second beams of optical radiation to the target; and detecting free-of image mis-registration on an FPA, radiation at the first polarization and radiation at the second

polarization from the target using a phase sensitive technique and the first and second frequencies, and in combination with the other recited limitations of claim 17. Claims 18-20 are allowed by the virtue of dependency on the allowed claim 17.

Response to Arguments

5. Applicant's arguments, see amendment, filed October 24, 2005, with respect to the rejection(s) of claim(s) 21 under U.S.C. 102(b) have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Hunt ('686).

Conclusion


6. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael P. Stafira whose telephone number is 571-272-2430. The examiner can normally be reached on 4/10 Schedule Mon.-Thurs..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gregory Toatley can be reached on 571-272-2800 ext. 77. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Michael P. Stafira
Primary Examiner
Art Unit 2877

January 6, 2006